

🔍 Title: **JP5009041A2: FIBER REINFORCED GLASS AND MANUFACTURE OF THE SAME**

🔍 Derwent Title: Fibre reinforced glass for window for optical sensor, vehicles etc. - prepd. by impregnating fibres of glass including nitrogen cpd., with slurry of glass powder, heating and pressing [[Derwent Record](#)]

🔍 Country: JP Japan

🔍 Kind: A (See also: [JP3158504B2](#))

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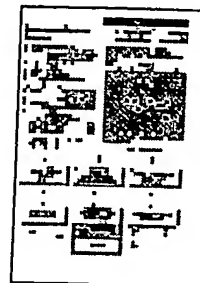
🔍 IPC Code: **C03C 14/00;**

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🔍 Abstract: **PURPOSE:** To improve the strength by heating and pressurizing the glass after a slurry of glass powders to be a matrix is impregnated to oxynitride glass fibers incorporating specified quantity of nitrogen atom.

CONSTITUTION: The powders of SiO₂, Si₃N₄, CaO, MgO and Al₂O₃ are respectively mixed in a specified weight ratio, heated and melted in a N₂ atmosphere and the melted mixture is cooled to be spun. SiO₂, Si₃N₄, and M₁O, in mol%, are represented with formulae I, II (M₁ is Ca or Ca+Mg, M₂ is the other metal than the prescribed metal), and Si-M₁-M₂-O-N based oxynitride glass fibers with N content of ≥5atom% are obtained. On the other hand, the organic solvent of n-butanol, etc., and a viscosity modifier are added to the matrix glass powders of 1-20μm particle size and the slurry is prepared. The slurry is added to a slurry bath 6 and the bundle of fibers 5 of the oxynitride glass is introduced into the slurry bath 6 to be impregnated. Subsequently, after it is dried and formed as a sheet, the sheet is laminated, heated and pressurized. Thus, the fiber reinforced glass is obtained.

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1 page